

The research program of the Center for Economic Studies (CES) produces a wide range of theoretical and empirical economic analyses that serve to improve the statistical programs of the U.S. Bureau of the Census. Many of these analyses take the form of CES research papers. The papers are intended to make the results of CES research available to economists and other interested parties in order to encourage discussion and obtain suggestions for revision before publication. The papers are unofficial and have not undergone the review accorded official Census Bureau publications. The opinions and conclusions expressed in the papers are those of the authors and do not necessarily represent those of the U.S. Bureau of the Census. Republication in whole or part must be cleared with the authors.

## **SURVIVAL PATTERNS AMONG NEWCOMERS TO FRANCHISING**

By

Timothy Bates\*  
College of Urban, Labor and Metropolitan Affairs  
3237 Faculty, Administration Building  
Wayne State University  
Detroit, MI 48202

CES 97-5    May 1997

All papers are screened to ensure that they do not disclose confidential information. Persons who wish to obtain a copy of the paper, submit comments about the paper, or obtain general information about the series should contact Sang V. Nguyen, Editor, Discussion Papers, Economic Planning and Coordination,

Center for Economic Studies, Washington Plaza II, Room 211,  
Bureau of the Census, Washington, DC 20233-6101, (301-457-1882)  
or INTERNET address [snguyen@info.census.gov](mailto:snguyen@info.census.gov).

## Abstract

This study analyzes survival patterns among franchisee firms and establishments that began operations in 1986 and 1987. Differing methodologies and data bases are utilized to demonstrate that 1) franchises have higher survival rates than independents, and 2) franchises have lower survival rates than independent business formations. Analyses of corporate establishment data generate high franchisee survival rates relative to independents, while analyses of young firm data generate the opposite pattern. In either case, the franchise trait is one of several determinants of survival prospects. The larger-scale, more established firms consistently stay in operation more frequently than smaller-scale, younger firms. Analysis of all corporate establishment restaurant units opened in 1986 or 1987 that use paid employees in 1987 helps to reconcile the seeming inconsistencies reported above. Most of the young franchisee units were not owned by young firms: rather, their parents were multi-establishment franchisees, and most of them were mature firms. Among the true newcomers, franchise survival rates are low; among the entrenched multi-establishment franchisees, survival rates were high.

Keywords: Survival Among Young Franchise Units

\*This report was supported by the U.S. Small Business Administration under contract SBA-8121-OA-94. Research reported in this study was conducted, in part, at the U.S. Bureau of the Census, Center for Economic Studies. The assistance of Alfred Nucci is gratefully acknowledged. Findings expressed are those of the author and do not necessarily reflect views of the U.S.

Bureau of the Census. The findings and recommendations stated in this report are those of the author and do not necessarily represent the positions and policies of the U.S. Small Business Administration.

## **Survival Patterns Among Newcomers to Franchising**

by

Timothy Bates  
College of Urban, Labor and Metropolitan Affairs  
3237 Faculty, Administration Building  
Wayne State University  
Detroit, MI 48202  
#313-577-0769

November 1996

\*This report was supported by the U.S. Small Business Administration under contract SBA-8121-OA-94. Research reported in this study was conducted, in part, at the U.S. Bureau of the Census, Center for Economic Studies. The assistance of Alfred Nucci is gratefully acknowledged. Findings expressed are those of the author and do not necessarily reflect views of the U.S. Bureau of the Census. The findings and recommendations stated in this report are those of the author and do not necessarily represent the positions and policies of the U.S. Small Business Administration.

## Abstract

### Survival Patterns Among Newcomers to Franchising.

This study analyzes survival patterns among franchisee firms and establishments that began operations in 1986 and 1987.

Differing methodologies and data bases are utilized to demonstrate that 1) franchises have higher survival rates than independents, and 2) franchises have lower survival rates than independent business formations. Analyses of corporate establishment data generate high franchisee survival rates relative to independents, while analyses of young firm data generate the opposite pattern. In either case, the franchise trait is one of several determinants of survival prospects. The larger-scale, more established firms consistently stay in operation more frequently than smaller-scale, younger firms. Analysis of all corporate establishment restaurant units opened in 1986 or 1987 that use paid employees in 1987 helps to reconcile the seeming inconsistencies reported above. Most of the young franchisee units were not owned by young firms: rather, their parents were multi-establishment franchisees, and most of them were mature firms. Among the true newcomers, franchise survival rates are low; among the entrenched multi-establishment franchisees, survival rates were high.

## Executive Summary

This study examines survival patterns among franchisee and nonfranchise small firms and establishments that entered business during 1986 and 1987. Aspiring entrepreneurs purchasing franchises choose this path to small business entry, in part, because they expect to improve their chances of survival during the turbulent early years of operation. Evidence to date has been mixed: some studies conclude that franchising is a low-risk route to small business ownership while others suggest that independent startups are more likely to remain in operation than franchises.

This study utilizes two distinct methodological approaches to investigate franchisee survival patterns: the first approach demonstrates that franchise units have better survival prospects than independents, and the second approach demonstrates that young firms formed without the benefit of a franchisor parent are more likely to remain in operation than franchised startups. Reconciliation of these seemingly inconsistent findings is explored.

Survival measurement is heavily influenced by the unit of analysis in franchising: firm-specific data show different

patterns than establishment-specific data when young franchise units are tracked through time. Analysis of establishments owned by corporations is undertaken for restaurants opened nationwide in 1986 and 1987. Using Census Bureau data describing corporate-owned restaurant establishments that reported payroll to the IRS in 1987, 52,088 young establishments were identified; 22.5 percent were franchises. Comparison of the franchisee and independent restaurant units indicated that independents were more likely to cease operations by 1988 than franchises.

The fact that franchisee establishments had a better survival track record than independent restaurants does not, however, demonstrate that aspiring entrepreneurs improve their survival prospects by purchasing a franchise. In fact, 84 percent of the new franchise establishments under consideration were units of multi-establishment corporations, and few of these corporate parents were new businesses. Envision a corporation in operation for 15 years that owns 20 McDonalds' restaurants; in 1987 they opened their 21st unit. The findings of this study indicate that this 21st unit has excellent survival prospects, more so than either an independent startup or a franchisee opening a restaurant for the first time. New franchised restaurant units, overall, may be a safe investment, while simultaneously, the newcomer opening a franchise may face a high-risk situation.

The analysis then shifts from establishments owned by

franchisees to young firms (not establishments) started in 1986 and 1987 as proprietorships, partnerships, or S-corporations. Among these young firms, franchisees are found to have lower survival rates than independent startups, and these differences persist when various firm and owner traits are controlled for statistically. Retailing is found to be a particularly difficult field for young franchised firms: risk of firm closure is high and mean profits are negative. The most common route into retailing entailed purchasing an operating franchise unit from its previous owner, i.e. an ongoing franchise. Over 53 percent of the young franchised retailing firms started in 1986 and 1987 were ongoing operations. By 1991, only 52.4 percent of these firms were still operating with the owner of record present in 1987.

The findings of this study indicate, on balance, that purchase of a franchise is unlikely to reduce the risks facing a new business startup. This does not imply that the multi-establishment franchisee adding another new franchise unit to its existing chain of operations faces a high-risk situation. Rather, the high risk facing the franchisee newcomer is partially rooted in the fact that so many of the newly-opened units in mature franchising niches are owned by multi-unit franchisees that have greater experience and resources than newcomers who are attempting to enter the industry.

Aspiring entrepreneurs choosing to become franchisees certainly expect to improve their chances of survival during the turbulent early years of business startup and operation. Alignment with a franchisor parent company offers the franchisee a range of possible advantages, including the right to use the parent company trademark (Rubin, 1978). This study examines survival patterns among franchisee and nonfranchise small firms and establishments that entered business during 1986 and 1987. New franchise operations in retailing were examined closely, because retailing has been identified as an industry in which young franchisees experience higher failure rates than cohort independent business startups (Bates, 1995a). Survival measurement is heavily influenced by the unit of analysis in franchising: firm-specific data show different patterns than establishment-specific data when young franchise units are tracked through time. Attempted reconciliation of these survival pattern differences for restaurant franchises reveals that most new establishments are not new firms: most are owned by multi-establishment franchisees that are not newcomers to the world of small business. Among the restaurant franchise units examined in this study, 84 percent were units of multi-establishment corporations. Note: the terms "establishment" and "unit" are interchangeable; they refer to one specific geographic location where a business is operating. A multi-establishment corporation is one that is conducting business at two or more distinct

locations.

The overall findings of this study suggest that the very new franchisees often see their businesses close down after several years in operation. This does not imply that the multi-establishment franchisee adding another new franchise unit to its existing business operations faces a high-risk situation. Rather, the high risk facing the franchisee newcomer is partially rooted in the fact that so many of the newly-opened units in mature franchising niches are owned by multi-unit corporations that have greater experience and resources than newcomers who are attempting to enter the industry. The established operators make survival problematic for newcomers.

Owners making their initial entry into self-employment by purchasing a franchise from a previous owner -- the most widespread route to entry in retailing -- are particularly at risk. The ongoing franchise units that are available for purchase appear to be disproportionately prone to going out of business. This study tracks a large group of ongoing franchisee operations that were bought by new owners in 1986 and 1987: only 52.4 percent were still operating in 1991 with the owner of record present in 1987. The ongoing franchisees lag badly behind their independent small-business owner cohorts when it comes to keeping their firms in operation.

#### Theoretical Framework

A substantial body of theoretical and empirical analysis

shows that better established, larger firms are more likely to remain in operation than younger and smaller businesses; see, for example, Jovanovic (1982), Evans (1987), Bates (1990a), and Bruderl, Preisendorfer, and Ziegler (1992). An established brand name is particularly relevant to understanding franchising, because franchising tends to thrive in market niches where these names are valuable. Because scale economies often exist in the promotion of brand names, firms owning these valuable trademarks need to operate at a sufficiently large scale to utilize this form of intellectual property efficiently (Mathewson and Winter, 1985). Business format franchising is one strategy whereby the owner of the brand name (franchisor) sells to another firm (franchisee) the right to use this trademark for a lump sum payment and royalty fees. The franchisor seeks to grow, thus realizing the scale economies present in marketing the brand name, and the franchisee receives a product mix, a marketing program, and a set of operating procedures, which are of value to the franchisee. Beyond use of the brand name, which facilitates access to customers for the franchisee, Rubin (1978) lists additional hypothesized advantages accruing to franchisees. First, franchisees lacking appropriate human capital can receive managerial assistance and advice from franchisors. Second, franchisors may make capital accessible, either by co-signing for a bank loan or by extending credit directly.

Studies of franchising have evoked contributions from agency

theory, most commonly, to explain the popularity of franchising among firms seeking to grow. Well-known problems facing owners of growing firms involve coping with shirking by employees (Jenson and Meckling, 1976). "Moral hazard exists when an entrepreneur cannot know for certain if an employee is working hard or is shirking. Adverse selection exists when an employee misrepresents his or her true abilities" (Shane, 1996, p. 218). Coping with these problems causes firms to incur monitoring costs. Given the particular focus of this study, franchisee startups versus independent businesses, monitoring costs incurred to lessen employee shirking are most commonly problems of franchisees, not nonfranchise startups.

The agency argument in favor of franchising (Norton, 1988; Shane, 1996) is set in a context whereby a multi-unit firm can either use employee managers to run geographically disbursed units, or sell units to franchisees. An employee manager may trade leisure for work (shirk). An owner manager (franchisee), provided with residual claims to profits, has goals more closely aligned with those of the franchisor (maximum unit profits), which reduces moral hazard and adverse selection problems, therefore lessening monitoring costs (Shane, 1996). The implicit assumption is that each franchised unit is run by an owner-manager, who manages the unit better than company managers would if the unit were company owned.

Among the new restaurant franchise units examined in this

study, 84 percent were units of multi-establishment corporations. In other words, the typical franchisee owns and operates a mini-chain of franchise units and the restaurants themselves are operated by employee store managers. The norm is that franchisor-owned restaurants are run day-to-day by employee managers hired by the franchisor, while the franchisee-owned restaurants are run day-to-day by employee managers hired by the franchisee. Both groups of employee-managers have incentives to shirk; the moral hazard problem has not been solved. Kaufman and Dant observe that "throughout the literature, the franchisee is implicitly assumed to be the owner operator, managing the day to day operation of an outlet situated far from the direct control of the franchisor/entrepreneur" (1996, p. 346). The problem with this assumption is that "multi-unit franchising is ubiquitous" (Kaufman and Dant, 1996, p. 343).

The moral hazard problem identified by agency theory is a rationale for the independent business startup, not the multi-unit franchisee. The owner-manager running his/her firm is the norm among the nonfranchise restaurant units examined in this study: only 22.3 percent of these independent owners were operating multi-unit firms, versus 84.0 percent of the franchisee restaurant owners. While the advantage of sharing a brand name is presumed to benefit the franchisee, the agency argument favors the single-unit owner, operator and they are disproportionately the firms starting without the benefit of a franchisor parent.

### Background: What Do the Numbers Really Mean?

The devotion of an entire chapter to franchising in the 1993 State of Small Business: A Report of the President is indicative of the high level of general interest in franchising. According to that report, franchise companies accounted for a large (34 percent) and growing share of all retail sales in the United States (U.S. Small Business Administration, 1993, ch. 3). A further point emphasized was the lack of appropriate data for analyzing many important aspects of franchising's role in the economy (U.S. Small Business Administration, 1993, pp. 111-12). A recurring theme in government and academic studies of franchising is that industry sources have manipulated these imperfect data in order to enhance public images of franchising's viability.

For four decades, the International Franchise Association (IFA) has been promoting the idea that small businesses in general have much higher rates of discontinuance than franchised small firms. A book by Atkinson (1968) presented evidence that most small retail firms close down within five years, while franchises were estimated to discontinue operations at an annual rate of 1.6 percent. A report of the U.S. Senate Select Committee on Small Business criticized the methodology used by Atkinson, concluding that "the book Franchising: Odds-On Favorite by J.F. Atkinson, published by the International Franchise Association, makes erroneous comparisons with overall retail

trade failure rates" (p. 98, 1971). The prestigious Conference Board sifted through the various studies and conflicting claims about franchisee viability and concluded that there was no solid evidence that franchisees had either a better or poorer chance for business survival than similarly qualified independent entrepreneurs (1971).

Similar claims of low franchise discontinuance rates have commonly been received with skepticism reminiscent of the Atkinson study. Figures cited by Ashman (1988) indicated that 92 percent of franchises are still in business at the end of five years, versus only 23 percent of the independent firms. Ashman's results, which cite the "U.S. Department of Commerce" as their source, typify business discontinuance rate figures that have been used in industry promotional literature. In fact, the U.S. Department of Commerce has, until recently, conducted annual surveys of franchisors and published the results in biennial reports, Franchising in the Economy. According to the staff of the U.S. House of Representatives Committee on Small Business, a comprehensive review of the Franchising in the Economy reports "fails to show any figures providing comparable failure or success rates for franchises or franchisees. On the contrary, the reports note specifically that the number of failures is unknown" (Franchising in the Economy, 1988), cited in Hearings before the Committee on Small Business (1992, p. 144).

More recent research sponsored by the IFA claims that 96.9

percent of the franchised units opened nationwide within the past five years were still in operation (Arthur Anderson and Co., 1992). Significantly, this survival rate information was compiled by surveying franchisors -- the corporations that sell franchises -- rather than the actual franchisee owners of the businesses whose survival is at issue. Castrogiovanni, Justis, and Julian observe that "individual franchisors may be reluctant to 'air their dirty laundry' by reporting excessive failure rates. . .it is in the best interests of the franchise sector as a whole to convey the appearance that franchising is a relatively safe form of business ownership" (1993, p. 106).

Knowledgeable scholars who study franchising issues routinely express concern about the reliability of failure rate statistics publicized by franchisors. Lafontaine, for example, states "one of the major selling points of franchising to franchisees over the years has been the statistics vehiculated by the trade press on the very low failure rates of franchised businesses compared to independent operations. These statistics never had real scientific basis" (p. 39, 1995).

In the course of writing his recent doctoral dissertation examining several franchises in depth, Birkeland noted that many of his subject franchisees were disappearing. For example, among King Cleaners franchisees, turnover in one 12 month period was 35.1 percent: 29.7 percent discontinued outright and 5.4 percent sold their franchises to new owners (Birkeland, 1995). Discontinuance rates of franchisor parent companies were recently scrutinized by Shane, who identified all franchisor parent companies nationwide that first began selling franchises in 1983. By 1993, only 24.6 percent of these franchisors were still operating (Shane, 1996).

Studies of small business formations utilizing U.S. Census Bureau data on startups occurring during the 1984-1987 period have contradicted the IFA's claims of low franchise failure rates. A sample of 20,554 young firms drawn from the U.S. Bureau of the Census Characteristics of Business Owners (CBO) data base was examined by Bates (1995a, 1995b), and all of these firms were surveyed in late 1991 to determine survival rates. By late 1991, 34.7 percent of the franchisees and 28.0 percent of the nonfranchised young firms active in 1987 had discontinued operations.

Noting the "heated debate" surrounding the issue of franchise survival, IFA president Cherkasky conceded recently that "it has never been precisely clear as to how many units have changed hands or ceased operating" (International Franchise

Association Educational Foundation, 1996, p.1). The IFA's latest study on the topic measured a discontinuance ratio for a nonrandom sample of franchise systems operating in the U.S. Using the total number of franchise units in operation at the end of 1993 as the base, this informative study calculated the sum of franchise units canceled or not renewed by the franchisor, plus those disaffiliated from the network for any other reason (such as closure). Among units operating at the end of 1993, 8.10 percent were observed to discontinue during 1994, and an additional 3.81 percent of the units were transferred to a new owner. This mean discontinuance figure of 8.10 percent was skewed by a subset of franchisors losing lots of units; the median discontinuance (4.65 percent) is therefore offered as "a better measure of central tendency in a set in which that data is skewed" (International Franchise Association Educational Foundation, p. 6). Mean or median, these figures are noteworthy because they document levels of franchise unit closure well above those reported in previous IFA-sponsored studies. Use of a nonrandom sample of 444 franchise systems is unfortunate, however, because there is no indication that these franchisors are representative of the nationwide franchise industry.

Divergent claims and findings have typified the empirical literature on franchise performance. The next section illustrates how differing research methodologies partially account for these enduring differences.

### Survival of What: Firms or Establishments?

When Castrogiovanni et. al. (1993) claim that about "four percent of all franchises fail each year" (p. 105), what exactly do they mean? First, their franchise data source suffers from selection bias, being "biased toward older and larger franchisors" (p. 107). Second, their unit of observation is the establishments franchised by these older and larger franchisors. These establishments may be owned by a multi-establishment firm or they might be owned by the franchisor. Third, their data are cross sectional, describing franchise establishments of all ages -- young and old. Thus, Castrogiovanni et. al. are really stating that four percent of the establishments connected to the older and larger franchisor systems fail each year in their cross-sectional data set. When Bates (1995b) claims of independent business startups that "their survival prospects are better than those of franchises" (p. 377), what does he mean? First, his data source includes only those firms legally organized as proprietorships, partnerships, or S-corporations (regular corporations are excluded). Second, the unit of observation is the firm itself, not the establishment: a firm owning five establishments, for example, counts as one firm. Third, his data include young firms only: relative to the base year 1987, firms are included only if they were started up or acquired by their owners since 1984.

These differences in populations studied typify empirical

analyses of franchise survival. While ostensibly addressing the same issue -- franchise survival -- studies predictably reach differing conclusions when they examine widely varying subsets of the business universe. Yet, reconciliation of diverse findings is within reach, and the reconciliation approach pursued in this section entails testing hypotheses drawn from economic theory and the findings of theoretically-based empirical studies.

Table one describes all corporate-owned restaurant establishments that began operations in 1986 and 1987, tracing their survival to 1988. Likelihood of survival is expected to be positively related to establishment size, but units owned by multi-establishment corporations may or may not have their survival prospects boosted. Because single-establishment firms are commonly run by their owner-manager, they incur lower monitoring costs to control employee shirking than multi-establishment firms. Yet, the single-establishment firms described in table one are all very young firms, while most of the multi-establishment operations that opened one or more new restaurant units in 1986, 1987 are older firms.

**Table one: Summary Statistics Describing Active and Inactive Corporation Restaurant Establishments (establishments formed in 1986, 1987 only)**

<u>A. Franchise Establishments Only</u>	<u>All Establishments</u>	<u>Active Establishments</u>	<u>Inactive Establishments</u>
1987 sales (mean)	\$584,466	\$592,992	\$402,836
Multi-establishment corporate owner*	84.0%	84.6%	71.5%
n	11,731	11,205	526

B. Nonfranchise Establishments Only

1987 sales (mean)	\$329,523	\$361,305	\$175,982
Multi-establishment corporate owner*	22.3%	24.8%	10.6%
n	40,357	33,436	6,921

\*Relative frequency

source: internal records, Bureau of the Census

Owners of recently created firms, according to Jovanovic, are handicapped by the uncertainty that characterizes owner managerial ability. Some may fail due to overreaching, while others misinterpret random bad luck as evidence of business nonviability. The young owners gradually learn and refine their managerial abilities by engaging in the actual running of a business and observing how well they do (Jovanovic, 1982, pp. 650-53). As they learn, firm behavior changes through time: those who revise their ability estimates upward often expand, while those embracing downward estimates may choose to close their businesses. Over time, survivors learn what their managerial abilities are; younger firms exhibit more variable behavior than established ones because owners are unsure about their abilities (Bates, 1990b).

The multi-establishment firms, in summary, have the advantage of being run by experienced owners, which is hypothesized to improve the survival prospects of their newly opened units, relative to new business startups. The new startup with a single establishment, on the other hand, is hypothesized to benefit from lower costs of monitoring employee shirking. The net effect of the experience advantage and the monitoring cost disadvantage is unknown, a priori, for the multi-establishment firm. In fact, table one demonstrates that the corporate establishment restaurants that were inactive by 1988 were disproportionately the smaller units (measured by 1987 sales) and

the single-establishment firms.

Table one's data were drawn from the Census Bureau's Census of Retail Trade for 1987, representing every young corporate-owned restaurant establishment that reported payroll to the IRS in 1987.<sup>1</sup> Among the resultant 52,088 restaurant establishments, 22.5 percent were franchises. The restaurant franchise establishments, furthermore, were both larger, on average, and more likely to be owned by a multi-establishment corporate parent than the restaurant establishments that were not franchises. Note that the typical franchise establishment described in table one is a unit of a multi-establishment franchisee firm, while 77.7 percent of the young independent establishments were single-unit firms.

Table two applies logistic regression models to delineate restaurant establishments that remain active in 1988 from those becoming inactive. Positive coefficient values are associated with units active in 1988, and vice versa for inactive restaurants.<sup>2</sup> Table two's logistic regression analysis indicates that franchisee establishments, other factors constant, were more likely to remain active than independent establishments. Another consistent finding is that the larger franchise units with multiple-establishment corporate parents are more likely to remain active than the other restaurant units. Thus the franchisees are more likely than the independents to remain active in part, because they are franchises, but also,

because they tend to be larger operations with multi-establishment owners. Some caution is in order in interpreting these results. Key determinants of firm survival prospects are unavailable in the data, and such missing variables are correlated to the franchise trait. For example, startup capitalization (a missing variable) is positively related to firm survival and franchise status (Bates, 1995a). A weak conclusion is in order: the logistic regression findings (table two) are consistent with the hypothesis that franchised establishments are more likely to remain active than independent restaurants.<sup>3</sup>

The above findings demonstrate that it is possible to link the franchise trait to improved survival prospects by focusing upon a mature franchising segment -- restaurants -- and restricting the analysis to corporate-owned establishments. An outsider contemplating purchase of a franchise might conclude from tables one and two that low franchise failure rates apply to the

**Table two: Logistic Regression: Explaining the Survival of Corporate-Owned Restaurant Establishments over the 1987-1988 Period (establishments formed in 1986, 1987 only)**

A. Franchise Establishments only

	<u>Regression Coefficient</u>	<u>Standard Error</u>	<u>Variable Mean</u>
Constant	-1.717*	.108	--
1987 sales	.002*	.000	584.466
Multi-establishment corporate owner	.788*	.101	.840
n	11,731		
-2 log likelihood	4,118.2		
Chi-square	176.0		

B. All Establishments

Constant	-1.087*	.108	-
1987 sales	.002*	.000	386.940
Multi-establishment corporate owner	.648*	.040	.362
Franchise	.700*	.053	.225
n	52,088		
-2 log likelihood	39,429		
Chi-square	3,316.1		

\*statistically significant, five percent significance level.

established firms in the restaurant niche more so than newcomers. This view is also supported by the evidence summarized in tables one and two. It is noteworthy that 84 percent of the franchised restaurant establishments opened nationwide in 1986 and 1987 (table one) were part of multi-establishment operations. Herein may lie an important bit of information about the safety of entering self-employment via the franchise route. Envision a corporation in operation for 15 years that owns 20 McDonalds' restaurants; in 1987, they opened their 21st unit. The findings of this section clearly indicate that this 21st unit has excellent survival prospects, better than a franchisee opening a restaurant unit for the first time in 1987.

Part of the hazard facing the new franchisee startup may be the fact that units being opened by competing franchisees are typically owned by multi-unit corporations active in this industry niche in previous years. New units, overall, may be a safe investment, while simultaneously, the newcomer opening a franchise may face a high-risk situation. This hypothesis is investigated below.

#### Analysis of Small Firms Entering Franchising

This section analyzes firms in the Census Bureau's Characteristics of Business Owners (CBO) data base that were formed over the 1986-1987 period and the unit of analysis is

firms, not establishments. Thus, the universe of firms covered in this section is 2,621,810 young small businesses, 82,202 of which are small business franchisees (franchisees were 3.1 percent of the 1986, 1987 small business startups that were operating in 1987).<sup>4</sup> One deficiency of the CBO data base is its exclusion of corporations that file income tax returns as C-corporations (Bates, 1996). Relative to the corporate establishment data analyzed in the previous section of the study, the CBO data are the other side of the coin: first, the established (multi-unit) franchises were overrepresented, and now the newcomers are being overrepresented. No single comprehensive data base represents small businesses across-the-board; none permit tracking of all franchise units started nationwide in any given year (Bates, 1996). The various data bases, finally, provide insights into franchise survival patterns that are not necessarily consistent.

Table three data indicate that franchisees are generally better endowed with traits linked to survival than nonfranchised young firms. In terms of mean 1987 sales revenues, the young, largely noncorporate franchisees report \$440,391, over five times larger than the corresponding figure of \$86,489 reported by the independent businesses (table three). Capitalization at startup is similarly much greater (mean value = \$94,886) for the proprietorship, partnership, and S-corporation franchisee firms,

more than three times greater than the nonfranchised firm capitalization of \$29,319. Only in the area of owner educational background do the franchisee firms appear to be weaker than the independents: 26.8 percent of the former and 35.1 percent of the latter had owners who had graduated from college. All of the above group mean differences are statistically significant. Despite the obvious strengths of the young franchisee firms summarized in table three, they are dramatically less profitable than independent firms of the same age, and they exhibit a lower survival rate -- 61.9 percent (versus 68.1 percent for nonfranchised firms) -- over the 1987-late 1991 time period. The differences in profitability are particularly dramatic: the average young franchisee reported negative profits in 1987, while the cohort independent small firm reported a profit of \$15,511. Despite the advantages of being larger scale, better capitalized young firms, the franchises are dramatically less profitable and their survival prospects are worse than those of independent business startups. Reasons for the

**Table three: CBO Firms Operating in 1987: A Comparison of Firm Traits for Franchisee and Independent Business Startups (Firms formed from 1986-1987 Only).**

<u>A. Firms in all industries</u>	<u>Franchises</u>	<u>Nonfranchised firms</u>
1987 sales (mean)	\$440,391	\$86,489*
# employees (mean)	4.6	0.9*

1987 net income (mean)	\$-4,501	\$15,511*
Total financial capitalization at startup (mean)	\$94,886	\$29,319*
% of firms in retailing	38.6%	16.5%*
% of firms still operating in late 1991	61.9%	68.1%*
<u>B. Firms in retailing only</u>		
1987 sales (mean)	\$911,522	\$130,371*
# employees (mean)	8.7	2.0*
1987 net income (mean)	-\$15,877	\$10,368*
Total financial capitalization at startup (mean)	\$146,139	\$45,966*
% of firms still operating in late 1991	61.3%	73.1%*

\*Trait differences between the above groups are statistically significant at the .05 significance level.

Source: CBO database.

poor relative performance of young franchisee firms are not immediately apparent.

Saturation in retailing niches (including restaurants) has been suggested as a possible cause of laggard franchise performance (Bates, 1995a). Extracting retail firms from table three, the franchises certainly lag behind the overall franchise population, as well as independent retail firms:

	<u>Young retail franchisees only</u>	<u>Young retail independents only</u>
1987 net income (mean)	-\$15,877	\$10,368
% of firms still operating in late 1991	61.3%	73.1%

The retail trait for young franchisees, however, may be highly correlated to another factor that is responsible for their laggard performance. Careful examination of the data base reveals one peculiarity of the retail franchisee group. They are much more likely to be entered by purchasing an ongoing operation from a previous owner (as opposed to starting a firm de novo): 53.5 percent of the young retail franchisee firms described in table three were ongoing when the present owner entered, versus 29.2 percent of the independent young retailers and 29.3 percent of nonretail young franchisees. Transfers of ownership among

franchised units, according to a recent International Franchise Association Educational Foundation study, often arise in troubled situations. "In many cases, a franchised unit is not renewed or canceled and then subsequently is transferred" (p. 10, 1996).

This transfer of ownership might place the unit directly in the hands of a new franchisee. Alternatively, ownership may revert to the franchisor, and the unit may be

**Table four: Young Franchisee Firms Operating in 1987: Selected Owner and Firm Traits.**

	Ongoing firms <u>only</u>	New firms <u>only</u>
<b>A. <u>Firm Traits</u></b>		
1987 sales (mean)	\$827,431	\$199,803*
# employees (mean)	7.1	3.1*
1987 net income (mean)	-\$6629	-\$3194
Total financial capitalization at startup (mean)	\$134,958	\$68,659*
% of firms still operating in late 1991	67.6%	58.7%*
<b>B. <u>Owner Traits</u></b>		
% college graduates	33.0%	22.4%*
% males	73.9%	62.3%*
n (unweighted)	433	377

\*Trait differences between the above groups are statistically significant at the .05 significance level.

Source: CBO data base.

subsequently sold to a new franchisee owner.

The retail firms stand out in that over half of them were ongoing; the ongoing firms stand out because of their large size and initial capitalization. These traits can be disentangled somewhat by dividing franchisee business into ongoing (purchased from a previous owner) and de novo (births) subgroups (table four). The ongoing trait is not linked to poor franchisee performance in table four: survival rates for new franchisees are significantly lower than those typifying the ongoing franchisees, and the two groups do not differ significantly regarding average profits. The interrelatedness of many of the firm traits under consideration, however, suggests that multi-variable econometric models are needed to sort out the issues at hand. The ongoing trait may still be the villain. Consider the following key interrelations. First, the well-capitalized firms are much more likely to remain in operation than poorly-capitalized franchisees. Second, the larger franchisees are much more likely to remain in operation than the small, young franchisees (Bates, 1995a). The fact that ongoing franchisees are most often well-capitalized, large firms has the effect of increasing their survival rates; conflicting influences, however, may simultaneously be decreasing the survival prospects of the ongoing franchisees.

There are two ways for the owner of a young franchisee firm to exit from the firm, and only one has been considered so far. The firm can either be closed down, or it can be sold to a new owner. Some of the franchisees operating in 1987 had changed ownership via such sales: 2.6 percent of the new firms and 15.2 percent of the ongoing operations that were still in operation in late 1991 had changed ownership. Among all of the ongoing, largely noncorporate franchisee firms described in table four, only 52.4 percent were operating in late 1991 with the same owner (or owners) present in 1987: nearly half of the original owners were gone by 1991.

**Table five: Late 1991 Status of Young Firms that were Operating in 1987 (1986 and 1987 firm startups only).**

	<u>All Franchisees</u>	<u>All Independent Firms</u>
<u>A. Young Firms Purchased from Previous Owner (Ongoing Firms)</u>		
1. Operating, same ownership	52.4%	68.1%
2. Operating, new ownership	15.2%	13.7%
3. Discontinued by 1991	32.4%	18.2%
<u>B. All Young Firms</u>		
1. Operating, same ownership	54.2%	62.4%
2. Operating, new ownership	7.7%	5.7%
3. Discontinued by 1991	38.1%	31.9%
<u>C. Young Firms Started as Births</u>		
1. Operating, same ownership	56.1%	61.5%
2. Operating, new ownership	2.6%	4.3%
3. Discontinued by 1991	41.3%	34.2%
<u>D. Firm Births as a Percentage of all Young Firms</u>	61.4%	85.8%

\* Firms defined as "operating, under new ownership" were, in all cases, actively operating small businesses in late 1991. A firm in the CBO data base (i.e. one in operation in 1987) that was sold after 1987 could appear in table five either as 1) discontinued, or 2) operating, new ownership. A firm sold in 1988 that shut down operations in 1990, for example, would be "discontinued" because it was not operating in late 1991. This study therefore does not measure all firms sold after 1987 but, rather, those sold but still active in late 1991.

Source: CBO data base

Many owners of ongoing firms exit by selling the firm to a new owner, who keeps the business in operation. Since ongoing firms (i.e. those purchased from a previous owner) are most common in retailing, it follows that the larger retail franchisees are the ones most prone to ownership turnover. Table five tracks ownership turnover and firm closure patterns. On the issue of the ongoing characteristic being associated with franchisee discontinuance, table five offers insights. Among the firms active in 1987 that had been purchased from a previous owner, 32.4 percent of the franchisees and 18.2 percent of the independents had closed down their operations by late 1991. In other words, the ongoing franchisees were 78.0 percent more likely than the independents to close down ( $.182 \times 1.78 = .324$ ). The corresponding discontinuance rate differential for the new franchisees and independents was 20.8 percent. The ongoing franchisees have significantly higher sales, capitalization, more employees, and their owners are more likely to be college graduates, relative to the ongoing independent young firms. Despite their larger size and greater investments of owner financial and human capital, the ongoing franchisees lag badly behind their independent cohorts when it comes to keeping their firms in operation. This suggests the following hypothesis: entering self-employment by purchasing an ongoing franchise operation is riskier than alternative routes to small business ownership. Econometric analyses (below) support this conclusion.

#### Econometric Analysis of Firm Survival Patterns

Relative to similarly aged independent firms, franchises are larger and better capitalized. Does the unique industry distribution of the franchisee small firm startups help to explain their relatively low survival rates? Franchisees are more apt to be buyouts -- is that the problem?

Impacts of firm size, capitalization, industry, the franchise characteristic, and other traits are investigated econometrically to determine their relationship to young firm survival patterns.

Over the period from 1987 to late 1991, over 32 percent of the young firms described in table three went out of business.<sup>5</sup> Firms sold to a new owner, merged, or otherwise acquired are not counted as discontinued if they continued to operate. Logistic regression equations are estimated in this section to explain small business longevity.

Based upon the findings of past econometric studies explaining firm longevity, greater owner investments of human and financial capital are expected to be related positively to the survival chances of young small business (Bates, 1990a). Labor input quantity is measured by owner hours spent working in the business, as well as marital status and number of paid employees. Quality of owner human capital is measured by two variables, level of formal education and presence of managerial experience prior to small business entry. Applicable demographic traits include owner age, minority racial/ethnic status, and gender. Greater owner age, a broad proxy for work experience, is expected to benefit firms until diminishing effort that is associated with old age sets in. Industry identifier dummy variables are added to the logit analysis to test the hypothesis that franchise survival patterns are shaped by industry effects. In an important sense, all of the above factors can be thought of as control variables, since the purpose of table six's logistic regression exercise is to observe the impact of the franchise trait, other things equal, upon firm survival. Note that detailed variable definitions are spelled out in the Appendix: Variable Definitions.

In the regression analysis of young firms operating in 1987, positive coefficient values are associated with firms still operating in late 1991, and vice versa. The franchisee

**Table six: Logistic Regression: Explaining Firm Survival Using Industry Variables  
(Firms formed in 1986, 1987 only).**

	<u>Regression Coefficient</u>	<u>Standard Error</u>	<u>Variable Mean</u>
Constant	-1.976*	.272	--
High school grad	-.122	.076	.296
College: 1-3 years	.064	.080	.253
College grad	.265*	.085	.205
Post-graduate	.564*	.094	.144
Management experience	.110*	.053	.294
Owner age	.087*	.012	39.4
Owner age <sup>2</sup>	-.0009*	.0001	1,679.9
Owner gender	-.054	.049	.736
Owner labor input	.026*	.002	18.094
Married	-.029	.051	.768
# employees	.095*	.015	1.1
Log financial capital	.103*	.005	7.0
Firm entered in 1987	-.624*	.043	.546
Franchisee	-.500*	.125	.031
Minority-owned firm	.120	.072	.094
Ongoing	.457*	.070	.151
Construction	.116	.092	.136
Manufacturing	.266	.150	.029
Wholesale	-.192	.128	.037
Transportation	-.666*	.117	.046
Retail	-.156	.090	.172

**Table six: Continued**

Finance, insurance, and real estate	.024	.105	.078
Service	-.109	.078	.416
-2 log likelihood	13,647.3		
Chi-square	1,736.2		

\*Statistically significant, five percent significance level

characteristic, other factors constant, is a highly significant determinant of firm survival: franchisees are more likely to go out of business than cohort independent firms. Other regression findings (table six) findings reinforce results of past studies explaining firm survival patterns. The surviving firms active in late 1991 are disproportionately those headed by highly-educated owners who worked full-time in the business. The surviving firms were the larger firms in the sense that they began operations with greater owner financial capital investments; labor input -- measured by number of employees -- was higher among the survivors (table six). The youngest firms -- those started in 1987 -- were most vulnerable to discontinuance, which is consistent with past findings (Evans, 1987; Bates, 1990a). Industry factors, finally, indicate that fields in which franchises are most numerous (retail and finance, insurance, and real estate) are not particularly failure-prone.

The analysis of young firm survival summarized in table six is dominated by the nonfranchise business startups, because they make up over 96 percent of the 1986 and 1987 firm creations. It is possible that the dynamics of firm discontinuance among young franchisees only differ: that is why franchisees are the only population analyzed in table seven. This logistic regression analysis of franchise survival contains several clear-cut findings. One finding is that ongoing franchises, after firm capitalization, size, and other traits are controlled for, emerge as much more prone to closure than franchisees started de novo. The ongoing trait was strongly linked to enhanced firm survival in table six's (regression coefficient = .457) analysis of young firms generally, but "ongoing" turned highly negative (regression coefficient = -1.693) when franchise survival patterns were explained in table seven.

In summary, franchises closely resemble the broader universe of small business startups

**Table seven: Logistic Regression: Explaining Firm Survival Among Franchisee Firms over the 1987-late 1991 Period (Firms formed in 1986, 1987 only).**

	<u>Regression Coefficient</u>	<u>Standard Error</u>	<u>Variable Mean</u>
Constant	-2.610	2.161	-
High school grad	-1.813*	.817	.458
College: 1-3 years	-1.196	.846	.230
College grad	-2.411*	.849	.182
Post-graduate	-1.223	.959	.083
Management experience	.537	.323	.330
Owner age	.045	.109	37.403
Owner age <sup>2</sup>	-.0002	.0013	.1524.2
Owner gender	1.323*	.349	.698
Owner labor input	.124*	.015	18.089
Married	-1.206*	.329	.811
# employees	.078*	.038	4.680
Log financial capital	.222*	.041	7.766
Firm entered 1987	-.693*	.319	.570
Minority-owned firm	-.089	.425	.120
Ongoing	-1.693*	.333	.390
Wholesale	.839	.915	.030
Transportation	-.756	.623	.051
Retail	.327	.364	.383
Finance, insurance, and real estate	.215	.569	.166
Service	4.643*	.803	.142

-2 log likelihood = 475.0

Chi-square = 567.8

\* Statistically significant, five percent significance level.

in the sense that the failure-prone young firms tend to be small, poorly capitalized, owner works part-time, and the very youngest firms are the most prone to shut down. Franchisees differ from young small businesses generally in two very important respects: First, better educated owners are not more likely to see their firms survive, and second, the ongoing characteristic is directly related to enhanced likelihood of firm closure.

### Concluding Comments

It is not the purpose of this study to evaluate every possible cause of young franchisee discontinuance. Entrepreneurs' risk preferences may influence their success in franchising. Williams (1994) argues, for example, that the more risk-averse person will prefer franchises because franchisor services presumably facilitate spreading the risk between a franchisee and the franchisor. This research effort has sought to expand our knowledge of franchising by narrowing and focusing the research agenda. Certain findings emerge with particular clarity. Presence or absence of the franchise characteristic does not alter significantly key bits of the emerging conventional wisdom about successful small business startups. It is the larger-scale, better-capitalized new firms that are more likely to remain in operation; overly small, part-time operations are less likely to endure. No support has been found for the hypothesis that one's initial foray into self-employment can be made safe by mere purchase of a franchise.

Findings of this study suggest that new and small franchisees are more likely to discontinue operations than independent startups, and this holds true when firm and owner traits are controlled for statistically. One clear-cut finding was that franchisees starting by purchasing the firm from a previous owner were riskier than franchisees starting from scratch. A person entering self-employment by purchasing an ongoing franchise risks acquiring a firm that is more

likely than a de novo startup to go out of business within the next few years.

Potential entrepreneurs drawn to franchising are often attracted by industry promotional material asserting that survival rates are high among franchised firms. Yet the information needed by potential franchisees to make informed choices about risks of failure in franchise versus independent business startups is fragmentary and misleading, most often. What is needed? First, units owned by franchisors should be netted out, and descriptive statistics should portray the record of franchisee operations only. Second, information on franchisee startups should be disaggregated from data describing the established firms in the franchisee population. Cross-sectional information describing young and old operations alike runs the risk of generating survival rate statistics that overstate firm closure rates among the older firms, while understating the incidence of closure among recent entrants. Third, establishment data is much less useful than firm data when it comes to identifying new franchisee operation performance. Restaurant franchisee establishments that were part of multi-unit firms were observed in this study to remain active more often than single-unit restaurants (whether franchised or independent). The multi-unit franchisee opening up another establishment may enjoy low risk of unit closure due to its substantial experience functioning in the applicable industry niche. A newcomer entering the industry cannot assume that this low risk of closure has applicability to the startup lacking such industry-specific experience. The potential franchisee needs to know how startup firms have performed, and data describing new establishment performance cannot provide this information. Fourth, studies of franchisee survival would convey more useful information if they were based upon data that were somehow representative of the franchisee universe. The recent IFA-sponsored study of discontinuance among franchise units owned by 444 franchise systems typifies

this problem (International Franchise Association Educational Association, 1996). This study 1) fails to delineate franchisor-owned units from franchisee units, 2) mixes together young and old franchise units, 3) reports establishment, not firm data, and 4) does not explain how the 444 franchise systems studied fit into the broader universe of franchising in the United States. The potential franchisee who relied upon statistics such as these to judge the relative risk of firm failure in franchising, as opposed to independent business formation, is simply not relying upon information that is directly applicable to the issue of new firm survival in franchising.

## Notes

1. The Census of Retail Trade data base is a fairly comprehensive source of information on corporate-owned establishments because most of them use paid employees. It is a poor source of information on proprietorships and partnerships, because many of them do not use paid employees and hence, are not covered by this data base. Note that corporate establishments not reporting payroll to the IRS in 1987 are excluded from the Census of Retail Trade, and hence, excluded from tables one and two of this study.
2. Inactive restaurants are defined as inactive if they reported no payroll to the IRS in any quarter during 1988. Some small restaurants may nonetheless still be operating without paid employees. To control for this possible bias, it is essential to include a measure of firm size in table two's logistic regression equations: the 1987 sales variable is significant, in part, because some small restaurants are being picked up in the data base as inactive because they are small, and lacking paid employees, not because they have closed down operations. Absent this control, the franchise independent variable in table two would produce a coefficient that was biased upwards.
3. Table two's analysis was replicated using all corporate-owned hotel and motel establishments of the same age. The franchise trait behaved as it did in table two. Over 61 percent of the hotel, motel franchise group units were owned by multi-establishment corporations (Bates, 1996).
4. Detailed descriptions of the CBO data base appear in Bates (1990b) and Nucci (1992).
5. Firm closure status was established by interviewing the 1987 owners of record; see Nucci (1992).

## References

- Arthur Anderson and Co. 1992. *Franchising in the Economy: 1989-1992*. Washington, D.C.: International Franchise Education Association.
- Ashman, R. 1988. Ingenuity and hard work equals franchise business success. *Franchising World* 12: 55-67.
- Atkinson, J. 1968. *Franchising: The Odds-On Favorite*. Chicago: International Franchise Association.
- Bates, T. 1990. Entrepreneur human capital inputs and small business longevity. *The Review of Economics and Statistics* 72: 551-559.
- Bates, T. 1990. New data bases in the social sciences: the characteristics of business owners data base. *Journal of Human Resources* 25: 752-756
- Bates, T. 1995. Analysis of survival rates among franchise and independent small business startups. *Journal of Small Business Management* 33: 26-36.
- Bates, T. 1995. A comparison of franchise and independent small business survival rates. *Small Business Economics* 7: 377-388.
- Bates, T. 1996. Survival patterns among franchisee and nonfranchise firms started in 1986 and 1987. Report to the U.S. Small Business Administration under contract SBA-8121-OA-94
- Bates, T., and Nucci, A. 1989. An analysis of small business size and rate of discontinuance. *Journal of Small Business Management* 27: 1-8.
- Birkeland, P. *The Sociology of Franchising: Trust and Control in the Service Economy*. Chicago: University of Chicago Press, Forthcoming.

- Bruderl, J., Preisendorfer, P., and Ziegler, R. 1992. Survival chances of newly founded business organizations. *American Sociological Review* 57: 227-241.
- Castrogiovanni, G., Justis, R., and Julian, S. 1993. Franchise failure rates: an assessment of magnitude and influencing factors. *Journal of Small Business Management* 31: 105-114.
- Evans, D. 1987. The relationship between firm size, growth, and age. *The Journal of Industrial Economics* 35: 567-581.
1971. *Franchised Distribution*. New York: The Conference Board.
- Franchising and the Economy*. Washington, D.C.: U.S. Department of Commerce, various issues.
- International Franchise Association Educational Association. 1996. Study of franchised unit turnover. Unpublished report.
- Jenson, M., and W. Meckling. 1976. Theory of the firm: managerial behavior, agency costs and ownership structure. *Journal of Financial Economics* 3: 305-360.
- Jovanovic, B. 1982. Selection and evolution in industry. *Econometrica* 50: 649-670.
- Kaufman, P., and Dant R. 1996. Multi-unit franchising: growth and management issues. *Journal of Business Venturing* 11: 343-358
- Lafontaine, F., and Bhattacharyya S. 1995. The role of risk in franchising. *Journal of Corporate Finance* 2: 39-74.
- Mathewson, G.F., and Winter R. 1985. The economics of franchise tying contracts *The Journal of Law and Economics* 28: 503-526.
- Norton, S. 1988. Franchising, brand name capital, and the entrepreneurial capacity

- problem. *Strategic Management Journal* 9: 105-114.
- Nucci, A. 1992. The characteristics of business owners data base. U.S. Bureau of the Census Center for Economic Studies discussion paper 92-7.
- Rubin, P. 1978. The theory of the firm and the structure of the franchise contract. *The Journal of Law and Economics* 21: 223-233.
- Shane, S. 1996. Hybrid organizational arrangements and their implications for firm growth and survival: A study of new franchisors. *Academy of Management Journal* 39: 216-234.
- U.S. Bureau of the Census. 1991. *1987 Census of Retail Trade*. Washington, D.C. : U.S. Department of Commerce.
- U.S. House of Representatives, Committee on Small Business. 1992. *Hearings: New Developments in Franchising*. Washington, D.C.: U.S. Government Printing Office.
- U.S. Senate, Select Committee on Small Business. 1971. *The Economic Effects of Franchising*. Washington, D.C.: U.S. Government Printing Office.
- U.S. Small Business Administration. 1993. *The State of Small Business: A Report of the President*. Washington, D.C. : U.S. Government Printing Office.

## Appendix:

### Variable Definitions

#### A. CBO Data Base Variables

The dependent variable in the logistic regression exercises of tables six and seven is whether or not the business that was operating in 1987 is still functioning in late 1991.

Businesses still operating are considered active firms; those that have closed down are considered discontinued. Independent variables are defined below:

Less than high school	For owners not completing high school, this variable = 1; (otherwise = 0).
High school grad	For owners completing four years of high school, this variable = 1; (otherwise = 0).
Some college	For owners completing at least one year of college but not attaining a bachelor's degree, this variable = 1; (otherwise = 0).
College grad	For owners awarded a bachelor's degree, this variable = 1; (otherwise = 0).
Post-graduate	For owners that attend graduate school beyond the bachelor's degree, this variable = 1, (otherwise = 0).
Management experience	For those working in a managerial capacity prior to owning the business they owned in 1987, this variable = 1; (otherwise = 0).
Owner age	A continuous variable measured in years.

Owner age <sup>2</sup>	Owner age squared.
Owner gender	For male owners, gender = 1; (otherwise = 0).
Owner labor input	Number of hours during the 1987 calendar year spent by the owner working in the relevant small business, divided by 100.
Employees	Average number of paid workers reported to the federal government on 1987 quarterly payroll forms.
Married	For married owners living with their spouse, married = 1; (otherwise = 0).
Log financial capital	The log of the sum of debt and equity capital used to start or become owner of the business.
Franchise	For franchisees, franchise = 1; (otherwise = 0).
Firm entered 1987	If the business was started or ownership was acquired during 1987, then this variable = 1; (otherwise = 0).
Minority-owned firm	If the firm is 51 percent or more minority-owned, then this variable = 1; (otherwise = 0).
Retail, service, finance, insurance, and real estate, construction, manufacture, wholesale, transportation:	A series of self-explanatory binary variables for identifying major industry groups.
Ongoing	If the owner acquired the business when it was already in operation, then ongoing = 1; if the owner was the original founder of the firm, then ongoing = 0.

## B. Census of Business Data Base Variables

The dependent variable in the logistic regression exercises summarized in table two is whether or not the establishment that was active in 1987 is still active in 1988. All establishments under consideration generated payroll greater than zero in 1987. They are considered to be “inactive” if the corresponding establishment payroll in 1988 was zero. Establishments reporting zero payroll are included in Census Bureau files for at least four quarters, on the theory that zero payroll in a single quarter (or two) may be a transitory occurrence. See Bates (1996) for elaboration on the nature of this data base. Independent variables are defined below:

1987 sales	A continuous variable measured in thousands of dollars (1987 sales = 386.940, for example, means that calendar year 1987 sales for the establishment were \$386,940).
Multi-establishment corporate owner	For establishments owned by a corporation that owns additional establishments beyond the one under consideration, this variable =1; (otherwise = 0).
Franchise	For establishments that operate as franchises, franchise = 1; (otherwise = 0).